

MULTI-BAND PLANAR INVERTED-F ANTENNAS INCLUDING  
FLOATING PARASITIC ELEMENTS AND WIRELESS TERMINALS  
INCORPORATING THE SAME

A multi-band planar inverted-F antenna includes a floating parasitic element.

- 5 For example, a planar inverted-F antenna includes first and second planar inverted-F antenna branches that extend on a dielectric substrate. The first planar inverted-F antenna branch is configured to resonate in response to first electromagnetic radiation in a first frequency band. The second planar inverted-F antenna branch is configured to resonate in response to second electromagnetic radiation in a second frequency
- 10 band. The floating parasitic element is configured to electromagnetically couple to the second planar inverted-F antenna branch when, for example, the second planar inverted-F antenna branch is excited by the electromagnetic radiation provided via an RF feed (when the antenna is used to transmit). The floating parasitic element is also configured to electromagnetically couple to the second planar inverted-F antenna
- 15 branch when the floating parasitic element is excited by electromagnetic radiation provided via free-space.